

### ABSTRACT

An internal combustion engine has a camshaft whose phase can be adjusted with respect to a crankshaft by means of a setting mechanism. Also provided are a crankshaft sensor which senses the crankshaft angle and a camshaft sensor which senses the camshaft angle. The method comprises the following steps: A reference value for the phase is adapted in a predefined position of the setting mechanism when a predefined condition is satisfied. A measurement value for the phase is determined depending on the sensed crankshaft angle and camshaft angle. A corrected measurement value for the phase is determined depending on the reference value and the measurement value for the phase. A control signal for controlling the internal combustion engine is determined depending on the corrected measurement value.